

UDC: 316.77(985)(045)

DOI: 10.37482/issn2221-2698.2021.42.170

The Power of Connectivity in the Arctic: Citizen Participation in Arctic Institutions*

© Alexandra MIDDLETON, Ph.D. (Econ.), researcher

E-mail: alexandra.middleton@oulu.fi

Oulu Business School, University of Oulu

Abstract. Increasing business opportunities in the Arctic in the spheres of tourism, transport, mining, oil and gas and creative industries require efficient connectivity. Arctic territories offer an attractive place for data servers running on green energy. The subsea fiber cable connecting European High North territories with the US and Asia is an opportunity to improve connectivity in the Arctic. The opening of the Arctic sea creates preconditions for such a project. In this paper, I study existing Arctic institutions that deal with connectivity issues in the Arctic. As theoretical frameworks, I use Gaventa's (1982) framework of power and powerlessness and stakeholder participation model. The power and powerlessness and modes of participation of stakeholders at the national and regional levels are investigated. I use secondary data, such as the EU and regional policies, statistical data on the topic of connectivity in the Arctic. The study contributes to the understanding of power structure and citizen participation in the Arctic institutions by using an example of connectivity in the Arctic. The findings suggest that Arctic institutions have very limited citizen participation opportunities due to their composition, working formats, and governance structures. Several suggestions for opening-up closed spaces to be inclusive of Arctic citizens perspectives are suggested.

Keywords: Arctic, power, Arctic institutions, citizen participation, connectivity.

Introduction

Arctic development has been under the radar of media and governments worldwide [1, Larsen J.N., Fondahl G., p. 22]. The Arctic is a prospective place for the development of tourism, transport, mining, oil and gas, food and creative industries. The Arctic region, however, requires substantial investments in the infrastructure such as urban, industrial, transport and telecommunication infrastructure¹. Connectivity is defined as the quality, state, or capability of being connective or connected, the ability to connect to or communicate with another computer or computer system². In the Arctic, context connectivity covers such topics as broadband accessibility for population and businesses, fibre network (including subsea cables), and data centres, amongst others.

Current modes of cooperation in the Arctic include a plethora of intergovernmental organisations and other fora that contribute to regional, national and global Arctic agenda. What remains uncertain is the role of Arctic citizens in these fora. The article's title is the power of connectivity, which metaphorically relates to the aspects of power and how Arctic citizens are connected to existing representations of power. As a demonstrative example, the issue of connectivity is chosen to limit the focus of the paper. However, the paper aims to investigate the power and powerlessness of citizen participation in the work of Arctic institutions. The study answers two research questions: 1) what work on connectivity is produced by the Arctic institutions? 2) how is citizen

* For citation: Middleton A. The Power of Connectivity in the Arctic: Citizen Participation in Arctic Institutions. *Arktika i Sever* [Arctic and North], 2021, no. 42, pp. 170–185. DOI: 10.37482/issn2221-2698.2021.42.170

¹ Guggenheim Partners. Financing sustainable development in the Arctic: Responsible investment solutions for the future, 2019. URL: <https://www.guggenheiminvestments.com/GuggenheimInvestments/media/PDF/Financing-Sustainable-Development-in-the-Arctic.pdf> (accessed 05 June 2020).

² Merriam-Webster dictionary

participation supported in the Arctic institutions? I find that while many institutions address Arctic issues, the Arctic Council (AC) and the Arctic Economic Council (AEC) have been most active in producing research and evidence concerning connectivity issues. Regarding citizen participation, the Arctic institutions (i.e., AC and AEC) have very limited citizen participation opportunities due to their composition and governance structures.

The remainder of the paper is organised as follows. First, Gaventa's power cube and citizen participation's theoretical background is summarised, followed by an overview of connectivity in the Arctic. Second, Arctic institutions and their work on connectivity are examined. Finally, the Arctic connectivity domain is analysed via power cube and citizen participation theoretical lenses. In conclusion, several solutions are offered for opening existing power spaces for citizens' participation. The paper contributes to the discussion on the efficiency of Arctic organisations [2, Smieszek M., pp. 3–26] and to the research highlighting the need to reform current Arctic institutions [3, Stokke O.S., pp. 13–26]. The article provides suggestions on the improvement of citizen participation in the work of Arctic institutions.

This paper uses the power cube theory by Gaventa (2003) to demonstrate the power and powerlessness of citizen participation in the Arctic institutes by using an example of connectivity [4, Gaventa J., pp. 1–267]. By Arctic institutions, I mean different intergovernmental and regional organisations and other institutional forms involved in promoting Arctic research and cooperation³.

Power cube by Gaventa

The distribution of power can be deconstructed using Gaventa's power cube framework that includes power, places and spaces (see Figure 1). The power cube helps to understand how power operates, how different interests can be marginalised from decision making, and the strategies needed to increase inclusion [5, Luttrell C., Quiroz S., Scrutton C., Bird K., pp. 1–16.].

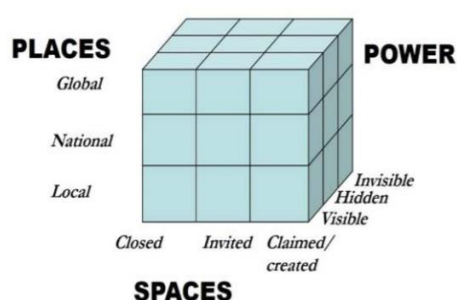


Fig. 1. The power cube framework⁴.

Spaces relate to the arena of power and how they are created. Three types of power spaces are distinguished [5, Luttrell C., Quiroz S., Scrutton C., Bird K., pp. 7–8]:

³ for a list of Arctic institutions see Table 1

⁴ Source: Institute of Development Studies.

- 1) Closed spaces. These are spaces reserved for elites, empowered groups and individuals. Decisions are made with little consultation or involvement of other actors
- 2) Invited spaces. Under external pressure or faced with legitimacy concerns, authorities may create opportunities for involvement and consultation, often legally constituted
- 3) Claimed/created. These are spaces often created outside formalised policy arenas. When external voices are excluded from formal organisations, they create collective action by themselves, through social movements or community associations.

Power in the power cube framework refers to the degree of power visibility. It can be regarded as the way the power is communicated.

- 1) Visible power is the conventional understanding of power that is negotiated through formal rules and structures, institutions and procedures. It can result in written policies, strategy and budget documents [7, Harris J., pp. 207–215]

- 2) Hidden power focuses on the controls over decision making, and the way certain powerful

institutions maintain their influence over the process and often exclude the views of less powerful groups. It can be viewed as mostly informal decision-making that set or influence the political agenda [6, Jacobi J., Llanque A., p. 4001]

- 3) Invisible refers to peoples' attitudes and consciousness, i.e., what people think and how this influences their psychological and ideological boundaries of participation in decision-making. Invisible power reflects how individuals think of their place in society and explain why some are prevented from questioning existing power relations [5, Luttrell C., Quiroz S., Scrutton C., Bird K., pp. 1–16].

The third dimension on the power cube framework is “places,” meaning the levels and places of engagement. Places are categorised into local, national, and global places. Local places include NGOs and local governments, national places refer to national governments, and global encompass international organisations and international NGOs.

Gaventa's power cube framework has been applied in studying ownership dynamics in local multi-stakeholder initiatives (MSI). Biekart and Fowler [8, Biekart K., Fowler A., pp. 1692-1710.] studied 17 MSI cases using a power cube framework and stakeholder engagement. They find that that “government ownership is less likely to arrive at successful outcomes unless there is a move towards more inclusive and broader societal ownership with its implications for how MSIs are governed” and “that top-down aggregated imperatives are simply too coarse to be relied on as a foundation for ownership-based agency” [8, Biekart K., Fowler A., p. 1706]. Furthermore, Gaventa's power cube' is applied in the exploration of food security in Zambia [7, Harris J., pp. 207–215] and local communities and in analysing tourism industry development in the Yamal Peninsula [9, Gorbuntsova T., Dobson S., Palmer N., pp. 67–79].

Citizen participation is tightly linked to the analysis of power relationships because the degree of citizen participation can shed light on the power dynamics of the system. Different models

include, e.g., a ladder of citizen participation [10, Arnstein S.R., pp. 216–224], five rungs of citizens participation [11, Thomas J.C., pp. 1–211], three models of citizens participation- active, passive and transitional [12, Timney M.M., pp. 88–101]; an evolutionary continuum of public administrator and citizen interaction [13, Vigoda E., pp. 527–540], *etc.* When pondering on the effect of citizen participation in governance, Agrawal and Ribot comment that “decentralisation is a strategy of governance to facilitate transfers of power closer to those who are most affected by the exercise of power.” [14, Agrawal A., Ribot J., p. 475]. In Arnstein’s view, “citizen participation is a categorical term for citizen power. It is the redistribution of power that enables the have-not citizens, presently excluded from the political and economic process, to be included in the future.” [10, Arnstein S.R., p. 216]. The advantages of citizen participation include some control over policy process, better policy and implementation decision. In contrast, disadvantages encompass cost and time constraints, worse policy decisions if heavily influenced by opposing interest groups and loss of decision-making control [15, Irvin R.A., Stansbury J., pp. 55–65].

In the EU context, the EU Lisbon Treaty (2007)⁵, through its Article 11 initiated transparency, civil society dialogue, and participatory tools. The implementation of Article 11 resulted in better regulation agenda and the creation of consultation platforms that give room to a more efficient collection of stakeholders’ opinions. The current concerns include standardisation of the consultation process and the new platforms’ setup balancing between the business-oriented lobby and citizen participation⁶. Still, the studies confirm that there has been some visible progress towards the implementation of Article 11 of the Lisbon Treaty in the EU context. Yet, at the same time, participation is used at times as a rhetorical device to imply that the European political process is more open than it is [16, Marxsen C. M., pp. 151–169].

For the purpose of this study, I do not submerge into the theoretical underpinning of citizen participation, but rather investigate its simplistic forms by addressing a question if current Arctic institutions allow any degree of citizen participation either by an opportunity to provide ideas, feedback or whether consultation process (stakeholder dialogue) is offered to the Arctic citizens. By Arctic citizens, I mean people (indigenous peoples and local people) who live in the Arctic regions of eight Arctic states.

Overview of Connectivity in the Arctic

First, I look at the Arctic strategies of the Nordic Arctic countries (Norway⁷, Sweden⁸, Finland⁹ and Denmark¹⁰) and Russia¹¹. Norway, Denmark, Sweden and Russia’s Arctic strategies have

⁵ The Treaty of Lisbon 2007. URL: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Aai0033> (accessed 05.09.2020).

⁶ Citizen’s participation and transparency: closing the gap. URL: <https://europeanmovement.eu/citizens-participation-and-transparency-closing-the-gap/> (accessed 11.09.2020).

⁷ Norway’s Arctic Strategy, 2017. URL: <https://www.regjeringen.no/en/dokumenter/arctic-strategy/id2550081/> (accessed 07 September 2020).

⁸ Sweden’s strategy for the Arctic Region, 2011. URL: <https://www.government.se/49b746/contentassets/85de9103bbbe4373b55eddd7f71608da/swedens-strategy-for-the-arctic-region> (accessed 10 September 2020).

no mentioning of connectivity¹². Out of investigated strategies, only Finland's strategy mentions that Finland "is seeking to establish itself as a new major centre for the cloud industry. Moreover, the weather conditions in the north are perfect for computer centres requiring efficient cooling. Exploiting northern connections greatly improves Finland's competitive position as a site for the information-intensive industry as the connections can be built in the direction of the North-East Passage linking Europe and Asia"⁸ [p. 11 and p. 37]. During its chairmanship in the Arctic Council 2017–2019, Finland had connectivity as one of its priorities. It is worth noting that all strategies mentioned above will be replaced by newer versions in 2020–2021, but what remains to be seen is whether connectivity in the Arctic is going to play a more significant role in them.

Business Index North report (2018)¹³ investigated the state of connectivity in the Arctic in Norway, Finland, Sweden and Russia. Currently, the northern regions do not have a direct subsea cable connection with Europe, the US, or Asia. All sub-sea cables land in the southern parts, creating a disadvantage of the Arctic region in terms of attractiveness for data centre players. Middleton and Rønning¹⁴ emphasise that lack of infrastructure capacity and diversity within the region applies both nationally and internationally [18]. The connectivity issue needs to be solved before the data centre value proposition can be fulfilled in the Arctic. The importance of connectivity solutions in the Arctic regions is essential for tourism development, telemedicine, and online teaching.

Further, to answer the research question of what work on connectivity is produced by the Arctic institutions, I identify Arctic institutions and search for their work on connectivity issues. In order to answer the research question on the availability of citizen participation, I look at the working format and engagement opportunities for stakeholders.

Table 1

*Arctic Institutions*¹⁵

Organisation	Established	Representation	Work format	Openness for citizen participation
Arctic Council ¹⁶	1996	Arctic States Observers Six indigenous Permanent Participant	Six permanent working groups	Potentially possible for indigenous

⁹ Finland's Strategy for the Arctic Region, 2013. URL: <https://vnk.fi/documents/10616/334509/Arktinen+strategia+2013+en.pdf/6b6fb723-40ec-4c17-b286-5b5910fbecf4> (accessed 11 September 2020).

¹⁰ Denmark, Greenland and the Faroe Islands: Kingdom of Denmark Strategy for the Arctic 2011–2020. URL: <https://um.dk/en/news/newsdisplaypage/?newsid=f721f2cb-aff1-4cf7-a3e7-14fda508690a> (accessed 10.09.2020).

¹¹ Strategia razvitiya arkticheskoy zony Rossiskoy Federatsii, 2013. URL: https://minec.gov-murman.ru/upload/iblock/b36/strategy_azrf.pdf (accessed 11 September 2020).

¹² Search words used: broadband, internet, connectivity, IT, ICT

¹³ Business Index North report, 2018. URL: <https://businessindexnorth.com/reports/?Article=61> (accessed 17 May 2020).

¹⁴ Middleton A., Rønning B. Data centers as critical infrastructure in the Arctic, High North News, 2020. URL: <https://www.highnorthnews.com/en/data-centers-critical-infrastructure-arctic> (accessed 17 June 2020).

¹⁵ Source: Compiled by the author.

¹⁶ Arctic Council. URL: <https://arctic-council.org/en/> (accessed 15 September 2020).

		organisations		peoples via Six indigenous Permanent Participant organisations
Barents Euro-Arctic Council (BEAC) ¹⁷	2007	Cooperation on intergovernmental Barents Euro-Arctic Council (BEAC) and interregional level Barents Regional Council (BRC).	Working groups (7 individual and six joint working groups)	No
Nordic Council (NC) ¹⁸	1952	Official body for formal inter-parliamentary co-operation. It has 87 members from Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland and Åland.	Funding agendas	No
Northern Forum (NF) ¹⁹	1991	NF is a non-profit, international organisation composed of fourteen sub-national or regional governments from five northern countries.	Work organised in 10 working groups	No
Northern Dimension (ND) ²⁰	1999	The Northern Dimension (ND) is a joint policy of four equal partners: the European Union (EU), Russian Federation, Norway and Iceland. The USA and Canada hold observer status in the ND.	Work organised in 4 partnerships: The Northern Dimension Environmental Partnership (NDEP), The Northern Dimension Partnership in Public Health and Social Well-being (NDPHS), the Northern Dimension Partnership on Transport and Logistics (NDPTL) and the Northern Dimension Partnership on Culture (NDPC). The structure, nature and tasks of partnerships vary from project-centered financing to export-oriented cooperation.	No
Standing Committee of Parliamentarians of the Arctic Region (SCPAR) ²¹	1993	A parliamentary body comprising delegations appointed by the national parliaments of the Arctic states (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the USA) and by the European Parliament. It also includes Permanent Participants representing indigenous peoples, and observers.	The conference meets every two years.	No
Arctic Economic Council (AEC) ²²	2014	The AEC is open to corporations, partnerships and indigenous groups with an economic interest in the Arctic.	Six working groups conduct work	Potentially possible for indigenous

¹⁷ Barents Euro-Arctic Cooperation. URL: <https://www.barentscooperation.org/en/About> (accessed 10 August 2020).

¹⁸ Nordic Council (NC). URL: <https://www.norden.org/en/nordic-council> (accessed 10 August 2020).

¹⁹ Northern Forum. URL: <https://www.northernforum.org/en/> (accessed 10 August 2020).

²⁰ Northern Dimension. URL: <http://www.northerndimension.info/northern-dimension> (accessed 10 August 2020).

²¹ Standing Committee of Parliamentarians of the Arctic Region (SCPAR). URL: <http://www.arcticparl.org/> (accessed 10 August 2020).

²² Arctic Economic Council. URL: <https://arcticeconomiccouncil.com/> (accessed 12 August 2020).

		Voting and non-voting members		peoples via Six indigenous Permanent Participant organisations nominations
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Seven different institutions promoting research and cooperation in the Arctic have been identified (see Table 1). Some are devoted to funding research (Nordic Council), some are dedicated to regional cooperation (BEAC and NF) and some have a clear emphasis on business cooperation (Arctic Economic Council).

Further, I list the work produced by these institutions that is related to connectivity in the Arctic. Table 2 summarises the findings. While the Northern Dimension produced three reports related to connectivity with the scope was on the Baltic Sea region without a specific focus on the Arctic challenges. Ministers of the Arctic Council established Arctic Council's Task Force on Telecommunications and Infrastructure in the Arctic states at the Iqaluit 2015 Ministerial Meeting.

Table 2

Arctic institutions' work related to connectivity

Organisation	Work related to connectivity
Northern Dimension	State of the Digital Region 2017: Exploring Automation, Education and Learning in the Baltic Sea Region Towards a Cross-border Open Data Agenda — A Case for a macro-regional agenda on open government data in the Baltic Sea Region (2016) State of the Digital Region 2016 — Cities Connecting the Digital Economy in the Baltic Sea Region
Arctic Council	The Task Force on Telecommunications Infrastructure in the Arctic (est. 2015) Report Improving Connectivity in the Arctic (2019)
Arctic Economic Council	AEC Working Group (WG) on Infrastructure Arctic Broadband — Recommendations for an Interconnected Arctic (2017)

The Task Force, co-chaired by Norway and the Kingdom of Denmark, has the mandate to “... develop a circumpolar infrastructure assessment as a first step in exploring ways to improve telecommunications in the Arctic”. The report by Task Force Report Improving Connectivity in the Arctic (2019)²³ highlights that the cost for connectivity in the Arctic communities is often significantly higher than in less remote, more densely populated communities; there is less access to high-speed networks in remote communities, and network outages occur more often. The report comments that future telecommunications infrastructure should be built to enable sustainable economic development.

²³ Arctic Council Task Force on Improved Connectivity in the Arctic. Improving Connectivity in the Arctic. Arctic Council Secretariat, 2019. URL: https://oaarchive.arctic-council.org/bitstream/handle/11374/2369/SAOXFI205_2019_RUKA_06_TFICA_Report-3rd-Draft%206%20May.pdf?sequence=1&isAllowed=y (accessed 17 August 2020).

Finally, the work produced by Arctic Economic Council, “Arctic Broadband — Recommendations for an Interconnected Arctic” (2017)²⁴ provides an analysis of the state of Arctic broadband. It also presents different funding options applicable in the Arctic, an overview of planned and ongoing projects related to connectivity, and recommendations for the future. The report also outlines building, maintaining and providing affordable communication services to end-users challenging in the Arctic due to dispersed population, geography, harsh climate, higher costs and human resource gap. The report brings forward the challenge: the lack of a comprehensive strategy for connecting all Arctic communities and the rest of the world. Overall, the analysis identified that two institutions Arctic Council and Arctic Economic Council, are the ones that produced work most relevant to connectivity issues in the Arctic.

The analysis of Arctic institutions’ work regarding openness for citizen participation included studying their websites and working formats. In most institutions, the work is conducted in closed working groups that predominantly constitute scientists and experts. Next, I looked at the Arctic institutions’ websites to access opportunities to provide feedback, consultation opportunities, and opportunities by the citizens to submit ideas and proposals. Based on the website information, none of these institutions offers such options (see Table 1). It should be noted that citizen participation in AC work can be deemed possible for indigenous Arctic people via Six indigenous Permanent Participant organisations. Furthermore, citizens may consider becoming politically active and get selected to national parliaments and then from there get nominated for Standing Committee of Parliamentarians of the Arctic Region (SCPAR).

Moreover, citizens can potentially join some observer organisations in the AC, e.g., the World Wide Fund for Nature, Arctic Programme (WWF), that offer avenues for citizens’ participation. In AEC working groups consist of AEC members that are represented by businesses operating in the Arctic. Arctic indigenous peoples have an opportunity for a mediated citizen participation in AEC’s work if nominated by Six indigenous Permanent Participant organisations. Still, based on the analysis, it is inferable that conventional models of citizen participation (opportunities of providing feedback, consultation opportunities, and options to submit ideas and proposals by the citizens) are not supported by the working format and governance structure of the Arctic institutions.

Since the article’s focus is connectivity, I study in more detail Arctic Council and Arctic Economic Council as institutions that produced most work on this subject. I evaluate the power dynamic of the Arctic connectivity domain by applying Gaventa’s power cube framework [4, Gaventa J., pp. 1–267].

Analysis of connectivity domain via power cube and citizen participation

The Arctic Council (AC) is an intergovernmental forum for promoting cooperation, collaboration, and integration between Arctic nations, indigenous communities, and other Arctic inhabit-

²⁴ Arctic Broadband report- Recommendations for an interconnected Arctic, 2017. URL: https://arcticeconomiccouncil.com/wp-content/uploads/2017/03/AEC-Report_Final-LR.pdf (accessed 19 August 2020).

ants. Founded in 1996 by the Ottawa Declaration, the Arctic Council comprises eight member nations and six permanent indigenous groups. The Arctic Council has been responsible for negotiating international agreements on oil spill response, search, and rescue and scientific cooperation in the Arctic. At the same time, the Arctic Council's work has been criticised for being ad-hoc and without due recourse to planning [17, Barry T., Daviðsdóttir B., Einarsson N., Young O.R., p. 102099].

Arctic Economic Council (AEC), established in 2014, has amongst its objectives to facilitate Arctic business-to-business and economic development and provide advice and a business perspective on specific areas of cooperation in the circumpolar region and the activities of the Arctic. The AEC consists of up to 42 representatives (each of the eight Arctic state and six Permanent Participant of the AC is entitled to name up to three business representatives to the AEC). AEC comprises solely business representatives [18, Łuszczuk M. pp. 37–48].

Next, I construct connectivity domain in the Nordic part of the Arctic by placing the work of AC and AEC and other organisations in the facets of power cube [4, Gaventa J., pp. 1–267; 5, Luttrell C., Quiroz S., Scrutton C., Bird K., pp. 1–16.] and paying attention to citizen participation availability. By connectivity domain, I mean a collection of relevant actors, stakeholders, places, spaces and power representations as in Gaventa's power cube. The analysis is summarised in Figure 3 with further description below.

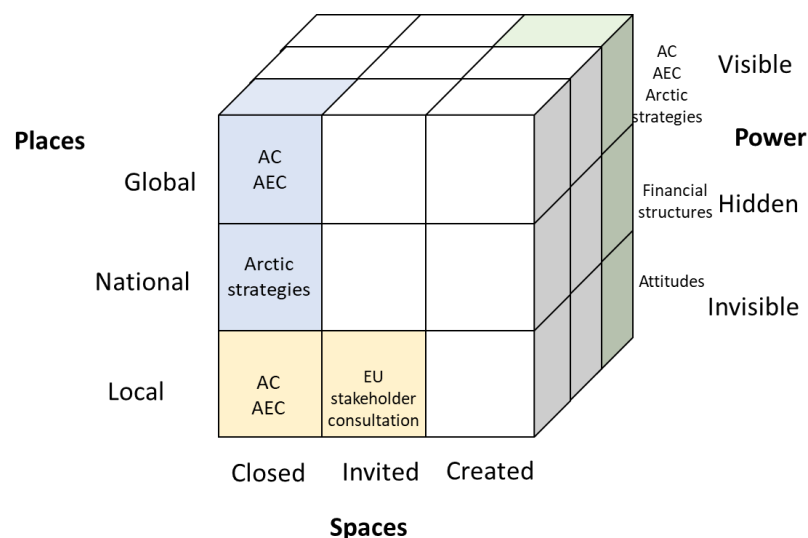


Fig. 3. Analysis of connectivity domain in the Nordic Arctic states.

Discussion on connectivity in the Arctic is done predominantly in two **places** global and national. AC and AEC represent **global places** since, in theory, they are open for participation to global players. For instance, "Arctic Council is open to non-Arctic states, along with inter-governmental, inter-parliamentary, global, regional and non-governmental organisations that the Council determines can contribute to its work." Observers can attend all Council meetings alongside member states and permanent participants. Currently, there are 13 non-Arctic states, 13 Intergovernmental and interparliamentary organisations, and 12 non-governmental organisations.

Similarly, apart from Arctic businesses, AEC is potentially open for stakeholders from across the globe as non-voting members. **National places** are represented by national Arctic strategies that currently do not consider connectivity as one of the priorities (except for Finland).

When analysing **spaces**, I look at the arena of power in the Arctic. Both AC and AEC represent **closed spaces** since they are reserved for elites, empowered groups, and certain selected individuals. Decisions are made with little consultation or involvement of other actors; moreover, both organisations are not open for citizen participation in a conventional format. The public sector (traditional government) is represented by the eight Arctic nations. In the case of AC, ministers and SAOs are politically appointed to the position by the state and citizens cannot vote for them. While business stakeholders are not represented in AC, they are the only stakeholder in the AEC. According to power cube both AC and AEC are considered closed spaces because of the lack or unavailability of publicly open information. In the case of AC, there are minutes of the meetings available on the website, but “minutes from Council meetings do not record any comments from observers during general plenary discussions”²⁵. In the case of AEC, minutes of the meetings are not available. There is no opportunity to watch meetings online or have access to recorded meetings. Access to the meetings is by invitation only.

Moreover, there is no opportunity to provide feedback or propose initiatives to Arctic citizens. Recently, AC launched a new marine cooperative initiative to discuss the increasing pressures on the Arctic marine ecosystem and coastal communities in the circumpolar North. Still, participation in the webinars is limited to Arctic Council delegates and invited external experts²⁶. Some degree of openness is pertinent to this new initiative as keynote, and expert presentations will be shared publicly on the Arctic Council’s Vimeo channel after the respective thematic session.

Why is the lack of access to meeting minutes or videos a challenge? Why should Arctic citizen participation be deemed important? As it stands, Arctic citizens do not have a direct communication channel with the two most influential organisations in the Arctic matters. Arctic citizens can potentially communicate their concerns via democratic institutions of their own countries, but this is time-consuming and a lengthy endeavour. Indigenous peoples that have representation in the AC as permanent participants have access to influence and participate in AC’s work through indigenous peoples’ organisations that represent their stake in the work of AC and AEC. While connectivity issues are of utmost importance for the Arctic citizens in terms of access to education, telemedicine and participation in the digital economy, the question addressed in this article is of a broader scale. What is Arctic citizens’ agency in the research, collaboration, and political decisions that directly concern their place of inhabitation?

Regarding **invited spaces** (that create opportunities for citizens’ involvement and consultation), there is no such option at the current working format of AC and AEC. Concerning connecti-

²⁵ Charter A. Trends among the Arctic Council Observers, 2017. URL: <http://polarconnection.org/arctic-council-observers-trends/> (accessed 17 July 2020).

²⁶ Arctic Council advances its stewardship role, 2020. URL: <https://arctic-council.org/en/news/arctic-council-advances-its-marine-stewardship-role/> (accessed 10 October 2020).

ty, the only invited space that was identified was initiated by the EU, which it currently does not have observer status in the AC but may observe Council proceedings until the decision on the status is made. In 2017, the EU launched the Arctic stakeholder forum consultation²⁷ to identify key investment priorities in the Arctic and ways to streamline better future EU funding programs for the region. As a result of the consultation process, the report states that stakeholders view as an investment priority “to extend and improve digital infrastructure “²³ [p. 2]. In 2020, the European Commission and the European External Action Service jointly launched a public consultation²⁸ on the way forward for the European Union’s Arctic policy, offering an avenue for citizens’ involvement and participation. No claimed spaces were identified in the Arctic context concerning connectivity issues.

Moving on to **power** component of power cube, **visible power** is represented via AC and AEC work. Both AC and AEC are formal institutions that have norms, rules, and procedures. Likewise, national Arctic strategies represent visible power. **Hidden power** concerning connectivity issues in the Arctic is represented by financial structures and certain powerful players that maintain their influence over the process (e.g., Internet giants like Facebook, Amazon, etc.). Finally, **invisible power** relating to peoples’ attitudes and consciousness, i.e., what people think and how this influences their psychological and ideological boundaries of participation in decision-making. Invisible power can be proxied by enhanced digitalisation of our lives, the privacy of information, digital traces, time spent online *etc.* In comparison, access to connectivity can be viewed as a significant lever that creates opportunities for people from remote areas to work anywhere in the world, which is especially relevant in the time of COVID-19. Simultaneously, the advent of connectivity requires that citizens have digital skills that protect them from invisible powers and dangers that digital lives entail.

The value of power cube exercise lies in the applicability of the concept for any critical matter in the Arctic. For example, it can be done for food security in the Arctic, where main players, agencies, and stakeholders are placed in the power cube depending on their access to power and ability to influence decisions. Power cube is a useful instrument for bringing to light voices and perceptions of different stakeholders’ capacity to exert power. It should also be noted that power cube may have other representations depending on the preparers’ perspectives. Hence power cube framework represents a viable tool to reconcile views of different stakeholders.

Conclusions

The article identified many fora for conducting cooperation and scientific research in the Arctic, which, however, lacks a mechanism for Arctic citizen participation. An example of connec-

²⁷ Summary report of the Arctic stakeholder forum consultation to identify key investment priorities in the Arctic and ways to better streamline future EU funding programmes for the region, 2017. URL: <https://op.europa.eu/en/publication-detail/-/publication/6a1be3f7-f1ca-11e7-9749-01aa75ed71a1/language-en/format-PDF/source-60752173> (accessed 05 December 2019).

²⁸ EU Arctic policy public consultation, 2020. URL: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12523-EU-Arctic-Policy> (accessed 15 September 2020).

tivity was chosen to have a focused case study of the issue that deeply affects all Arctic citizens. However, the chosen methodology can be applied to any sphere of human activity. This study contributes to the research addressing the need to reform existing-working mechanisms and governance structures of the Arctic institutions [3, Stokke O.S., pp. 13–26; 17, Barry T., Daviðsdóttir B., Einarsson N., Young O.R., p. 102099]. Research by Turnhout and Bommel (2010) suggests that participation creates citizens and “participation as a performative practice emphasises that identities, knowledge, interests, and needs are not represented but shaped, articulated, and constructed in the participation process itself” [19, Turnhout E., Van Bommel S., p. 26]. Hence, it becomes a feasible question to address for the future: whose identities, perspectives, and views are currently not included in Arctic institutions’ work?

The following suggestions can be implemented for opening closed spaces. In AC and AEC’s work, there can be more focus on transparency and citizens’ rights to information disclosure. It can be achieved by greater accountability, starting from the publication of meeting minutes and release of recorded meetings; the research project selection process could benefit from more transparent disclosures. To engage with citizens AC and AEC can, e.g., adopt the EU model of the stakeholder consultation process to inform, for instance, on the needs of future research projects and initiatives. It shall be noted that facilitating citizen participation and breaking institutionalised power dynamics is not easy and shall be not done for the achievement of face value. Still, it should include a feasible, cost-efficient process based on the best practices of intergovernmental organisations works.

Furthermore, creation of the national Arctic strategies could involve elements of stakeholder consultation and citizen engagement process as well, ensuring that the people who live in the Arctic have their voices heard and mechanisms for citizen participation are embedded in the strategies’ design. Procedures and policies that directly affect Arctic citizens’ lives need to include meaningful priorities and improve everyday lives for people that inhabit the Arctic. Returning to this article’s title, connectivity, and the power of connectivity, digital solutions appear to be some of the most efficient ways to have more engagement with the citizens and potentially enhance citizen participation in Arctic institutions’ work. To sum, connectivity in the Arctic becomes even more critical in times of COVID-19 pandemic when people are forced to move their work, education and medical services online. Access to connectivity can be viewed as a lever that creates more equal opportunities for people in the Arctic remote areas. Citizen participation can also be considered as a lever that brings cooperation and research done in the Arctic closer to the people directly impacted by it.

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Received on October, 14 2020